REMARKS

Claims 1-42 are pending. Claims 1-10, 12-16 and 36-42 were examined and rejected.

The claims are not amended.

In view of the following remarks, reconsideration of this application is respectfully requested.

Rejections withdrawn

The Examiner's decision to withdraw the rejection under 35 U.S.C. § 102 over Albitar is acknowledged and appreciated.

Claim Rejections – 35 U.S.C. § 102

Claims 1-10 and 12-16 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Lappin (J. Mol. Diagnostics, 2001 3:178-188). The Applicants respectfully traverse this rejection.

A claim is only anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The Applicants submit that Lappin discloses neither "determines an anticipated abundance of a target in a sample", nor "identifying a number of copies of a first probe for said first target, wherein said identified number of copies is dependent on said determined anticipated abundance" as required by the instant claims. As such, Lappin cannot anticipate the rejected claims, and this rejection should be withdrawn.

In attempting to establish this rejection, the Examiner argues that Lappin discloses the claimed method because Lappin's method includes optimizing the concentration of oligonucleotide probes, and then fabricating an array containing probes at optimized concentration. However, at no point does Lappin determine an anticipated abundance of a target in a sample, as required by the claims.

The Applicants acknowledge that Lappin performs a titration experiment in which probes of different concentration are hybridized with a labeled target. The results of this experiment are shown in Fig. 5. However, the Applicants believe that Lappin does not perform his titration experiment in order to anticipate the abundance of the target to which that probe binds. Rather, Lappin's performs a titration experiment probe titration experiment in order optimizes probe concentration for physical variation in the probes themselves (e.g., the differences in T_ms, sequence, G/C richness, degree of secondary structure, batch, etc., between the different probes). Since Lappin's probes are quite small (many of probes are 20-mers; see Table 1B), and Lappin's hybridization temperatures are quite low (see, p. 179, col. 2,), such physical variation would be expected to yield a very wide range of signal intensities when hybridized with a labeled probe. Such variation would make it impossible to detect the subtle point mutations, such as those of the β-thalassemia and cystic fibrosis loci, that are the target of Lappin's mutation detection method.

As such, it is believed that Lappin's probe titration experiment was *not* done to determine the abundances of the targets to which the probes bind. Rather Lappin's probe titration experiment was done so that the physical variation of the probes can be normalized.

In support of the above, the Applicants further note that Lappin would have no need to determine the abundance of a target to which a probe binds because his method is a mutation detection method that uses a genomic sample in which the targets are all at approximately the same concentration.

In view of the foregoing discussion that Lappin discloses neither "determines an anticipated abundance of a target in a sample", nor "identifying a number of copies of a first probe for said first target, wherein said identified number of copies is dependent on said determined anticipated abundance" as required by the instant claims. As such, Lappin cannot anticipate the claims, and this rejection should be withdrawn.

Claim Rejections – 35 U.S.C. § 103

Claims 2-5 and 36-42 are rejected under 35 U.S.C. § 103 as allegedly unpatentable over Lappin in view of Rothberg (U.S. 6,355,423). As best understood

by the Applicants, the Examiner believes that Lappin's method of making a probe-optimized array, in combination with Rothberg's array densities, renders the claims obvious. The Applicants respectfully traverse this rejection.

As noted above, Lappin is deficient in that it fails to teach or disclose any step that requires determining an anticipated abundance of a target in a sample, as required by the instant claims.

Rothberg, relied upon solely to provide array densities, also fails to disclose any step that requires determining an anticipated abundance of a target in a sample. As such Rothberg cannot meet Lappin's deficiency.

As such, the cited references, taken alone or in any combination, fail to teach or suggest all of the elements of the rejected claims. As such, under current law, the cited references cannot render the rejected claims obvious.

The Applicants submit that this rejection has been adequately addressed. Withdrawal of this rejection is respectfully requested.

CONCLUSION

Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone James Keddie at (650) 833-7713.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078, order number 10031014-1.

Respectfully submitted,

Date: October 10, 2007

By: _____
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